JANUARY 1994 VOLUME 102 NUMBER 1

1 **IN THIS ISSUE**

REVIEW

3 **Green Tea and Skin—Anticarcinogenic Effects** Hasan Mukhtar, Santosh K. Katiyar, and Rajesh Agarwal

EDITORIALS

8 **Epidermis as a Secretory Tissue** Steven T. Boyce

CORRECTION

11 **Molecular Markers of Retinoid Activity in Skin** Christopher P. F. Redfern

REPORTS

13 **Prenatal Diagnosis of Epidermolytic Hyperkeratosis by Direct Gene Sequencing** Joseph A. Rothnagel, Mary A. Longley, Rhanda A. Holder, Wolfgang Küster, and Dennis R. Roop

17 **Mutations in the H1 and 1A Domains in the Keratin 1 Gene in Epidermolytic Hyperkeratosis** Jun-Mo Yang, Constantin C. Chipev, John J. DiGiovanna, Sherri J. Bale, Lyuben N. Marekov, Peter M. Steinert, and John G. Compton

24 **Mutations in the Rod 1A Domain of Keratins 1 and 10 in Bullous Congenital Ichthyosiform Erythroderma (BCIE)** W. H. Irwin McLean, Robin A. J. Eady, Patricia J. C. Dopping-Hepenstal, James R. McMillan, Irene M. Leigh, Harshad A. Navsaria, Caroline Higgins, John I. Harper, David G. Paige, Susan M. Morley, and E. Birgitte Lane

31 **Superantigenic Staphylococcal Exotoxins Induce T-Cell Proliferation in the Presence of Langerhans Cells or Class II–Bearing Keratinocytes and Stimulate Keratinocytes to Produce T-Cell–Activating Cytokines** Yoshiki Tokura, Junji Yagi, Mark O'Malley, Julia M. Lewis, Masahiro Takigawa, Richard L. Edelson, and Robert E. Tigelaar

39 **Purification of the 230-kD Bullous Pemphigoid Antigen (BP230) from Bovine Tongue Mucosa: Structural Analyses and Assessment of BP230 Tissue Distribution Using a New Monoclonal Antibody** David H. Klatte and Jonathan C.R. Jones

45 **Hypermutable Ligation of Plasmid DNA Ends in Cells from Patients with Werner Syndrome** Thomas M. Rünger, Cathrin Bauer, Barbara Dekant, Karin Möller, Petra Sobotta, Christian Czerny, Martin Poot, and George M. Martin

49 **Biologic Activities of Retinoic Acid and 3,4-Didehydroretinoic Acid in Human Keratinocytes Are Similar and Correlate with Receptor Affinities and Transactivation Properties** Hans Törmä, Daniel Asselineau, Eva Andersson, Bernard Martin, Pascale Reiniche, Pierre Chambon, Braham Shroot, Michel Darmon, and Anders Vahlquist

55 **Epidermis as a Secretory Tissue: An *In Vitro* Tissue Model to Study Keratinocyte Secretion** Anne B. Katz and Lorne B. Taichman

61 **Secretion of Apolipoprotein E by Basal Cells in Cultures of Epidermal Keratinocytes** Rose M. Barra, Elizabeth S. Fenjves, and Lorne B. Taichman

67 **Interleukin 1α but Not Transforming Growth Factor β Inhibits Tumor Antigen Presentation by Epidermal Antigen-Presenting Cells** Stephan Grabbe, Sandra Bruvers, and Richard D. Granstein

74 **T-Cell Receptor Diversity in Dendritic Epidermal T Cells in the Rat** Adelheid Elbe, Oliver Kilgus, Thomas Hünig, and Georg Stingl

80 **Non-Sensitizing Epicutaneous Skin Tests Prevent Subsequent Induction of Immune Tolerance** Ingrid M.W. van Hoogstraten, B. Mary E. von Blomberg, Dagmar Boden, Georg Kraal, and Rik J. Scheper

84 **Differential Inhibition of Cutaneous T-Cell–Mediated Reactions and Epidermal Cell Proliferation by Cyclosporin A, FK-506, and Rapamycin** Janet I. Duncan

89 **Quantification of Cellular Proliferation in Acne Using the Monoclonal Antibody Ki-67** Helen E. Knaggs, Diana B. Holland, Chris Morris, Edward J. Wood, and William J. Cunliffe

93 **Office-Based Physician Services Provided by Dermatologists in the United States in 1990** Alan B. Fleischer, Jr., Steven R. Feldman, and Douglas D. Bradham

98 **Interleukin-1 Increases 15-Hydroxyeicosatetraenoic Acid Production in Human Dermal Fibroblasts** Nuria Godessart, Luis Vila, Luis Puig, and Josep Ma de Moragas

105 **Intracellular Accumulation of Collagen VII in Cultured Keratinocytes from a Patient with Dominant Dystrophic Epidermolysis Bullosa** Adrian König, Michael Raghunath, Beat Steinmann, and Leena Bruckner-Tuderman

111 **Basal Detachment of the Epidermis Using Dispase: Tissue Spatial Organization and Fate of Integrin $\alpha 6\beta 4$ and Hemidesmosomes** Yves Poumay, Isabelle H. Roland, Michèle Leclercq-Smekens, and Robert Leloup

118 **Inhibition of Collagen Lattice Contraction by Pentoxifylline and Interferon-Alpha, -Beta, and -Gamma** Michael J. Dans and Rivkah Isseroff

BRIEF COMMUNICATION

122 **Enzymic and Non-Enzymic Antioxidants in Epidermis and Dermis of Human Skin** Yasuko Shindo, Eric Witt, Derick Han, William Epstein, and Lester Packer

MEETING REPORT

125 **Workshop on the Pathogenesis of Chronic Wounds** Vincent Falanga, Frederick Grinnell, Barbara Gilchrest, Yvonne T. Maddox, and Alan Moshell

0022-202X/94/$07.00 Copyright © 1994 by The Society for Investigative Dermatology, Inc.

PROGRESS IN DERMATOLOGY

128 **Atopic Dermatitis: Recent Trends in Pathogenesis and Therapy** Kevin D. Cooper

BOOK REVIEW

138 **Dubois' Lupus Erythematosus, 4th Ed. Edited by Daniel J. Wallace and Bevra Hannahs Hahn** Lela A. Lee

FEBRUARY 1994 VOLUME 102 NUMBER 2

139 **IN THIS ISSUE**

REVIEW

141 **Novel Fundamental Approaches to Intervening in IgE-Mediated Allergic Diseases** Jan E. de Vries

REPORTS

145 **T Cells Involved in Psoriasis Vulgaris Belong to the Th1 Subset** Jörg F. Schlaak, Michael Buslau, Wolfram Jochum, Elisabeth Hermann, Matthias Girndt, Harald Gallati, Karl-Hermann Meyer zum Büschenfelde, and Bernhard Fleischer

150 **Interferon Gamma-Treated Keratinocytes Activate T Cells in the Presence of Superantigens: Involvement of Major Histocompatibility Complex Class II Molecules** Poul Strange, Lone Skov, and Ole Baadsgaard

155 **Heterogeneity of Severe Dystrophic Epidermolysis Bullosa: Overexpression of Collagen VII by Cutaneous Cells from a Patient with Mutilating Disease** Adrian König, Jan-Olof Winberg, Tobias Gedde-Dahl Jr., and Leena Bruckner-Tuderman

160 **Stimulation of Hair Growth by Topical Application of FK506, a Potent Immunosuppressive Agent** Satoshi Yamamoto, Hong Jiang, and Ryuichi Kato

165 **The Large Type II 70-kDa Keratin of Mouse Epidermis Is the Ortholog of Human Keratin K2e** Frank Herzog, Hermelita Winter, and Jürgen Schweizer

171 **Characterization of a Hair (Wool) Keratin Intermediate Filament Gene Domain** Barry C. Powell and Juliana S. Beltrame

178 **Dietary Cysteine Regulates the Levels of mRNAs Encoding a Family of Cysteine-Rich Proteins of Wool** Antonio Fratini, Barry C. Powell, Philip I. Hynd, Rebecca A. Keough, and George E. Rogers

186 **Effects of EGF on the Morphology and Patterns of DNA Synthesis in Isolated Human Hair Follicles** Michael P. Philpott and Terence Kealey

192 **Ultraviolet A Decreases Epidermal Growth Factor (EGF) Processing in Cultured Human Fibroblasts and Keratinocytes: Inhibition of EGF-Induced Diacylglycerol Formation** M. Djavaheri-Mergny, C. Mazière, R. Santus, L. Dubertret, and J. C. Mazière

197 **Prevention of Ultraviolet Radiation–Induced Suppression of Contact and Delayed Hypersensitivity by *Aloe barbadensis* Gel Extract** Faith M. Strickland, Ronald P. Pelley, and Margaret L. Kripke

205 **Type VII Collagen Gene Expression by Human Skin Fibroblasts and Keratinocytes in Culture: Influence of Donor Age and Cytokine Responses** Yue Qiu Chen, Alain Mauviel, Jaana Ryynänen, Stephan Sollberg, and Jouni Uitto

210 **Characteristic Morphologic Abnormality of Harlequin Ichthyosis Detected in Amniotic Fluid Cells** Masashi Akiyama, Dong-Kun Kim, Denise M. Main, Carl E. Otto, and Karen A. Holbrook

214 **Human Eccrine Sweat Contains Tissue Kallikrein and Kininase II** Toshihiko Hibino, Toshiyuki Takemura, and Kenzo Sato

221 **Characterization, Expression, and Immunohistochemical Localization of 5α-Reductase in Human Skin** Van Luu-The, Yasuro Sugimoto, Libertad Puy, Yvan Labrie, Irma Lopez Solache, Mohan Singh, and Fernand Labrie

227 **T-Cell Receptor Gene Rearrangement in Canine Mycosis Fungoides: Further Support for a Canine Model of Cutaneous T-Cell Lymphoma** David P. Fivenson, Ghassan M. Saed, Elsa R. Beck, Robert W. Dunstan, and Peter F. Moore

231 ***bcl-2* Protein Expression and Correlation with the Interchromosomal 14;18 Translocation in Cutaneous Lymphomas and Pseudolymphomas** Lorenzo Cerroni, Matthias Volkenandt, Edgar Rieger, H. Peter Soyer, and Helmut Kerl

236 **Identification of a Novel Basement Membrane Antigen (p84) Defined by Sera with Antibodies to Both the Epidermal and Dermal Side of Split Skin** Shun-Qiang Gao and Jean-Claude Bystryn

241 ***In Vivo* Prevention of Corticosteroid-Induced Skin Atrophy by Tretinoin in the Hairless Mouse Is Accompanied by Modulation of Collagen, Glycosaminoglycans, and Fibronectin** Elaine Schwartz, James A. Mezick, Gerard J. Gendimenico, and Lorraine H. Kligman

247 **Immunohistochemical Localization of a Novel β_1 Integrin in Normal and Pathologic Squamous Epithelia** Amilcare Cerri, Anna Favre, Marina Giunta, Giorgio Corte, Carlo E. Grossi, and Emilio Berti

253 **Leukotriene A_4 Hydrolase in Human Skin** Kouichi Ikai, Hiroko Okano, Yuji Horiguchi, and Yasuko Sakamoto

BRIEF COMMUNICATIONS

258 **Effect of Melatonin on Human Skin Color** Doff B. McElhinney, Stephen J. Hoffman, William A. Robinson, and Jan Ferguson

260 **Collagen VII in Severe Recessive Dystrophic Epidermolysis Bullosa: Expression of mRNA but Lack of Intact Protein Product in Skin and Cutaneous Cells *In Vitro*** D. Ulrike Kalinke, Ulrich Kalinke, Jan-Olof Winberg, Adrian König, Jorma Lauharanta, Angela M. Christiano, Jouni Uitto, and Leena Bruckner-Tuderman

ABSTRACTS

263 **The Symposium "Melanin: Its Role in Human Photoprotection"** Washington, D.C., March 11–12, 1994

270 **Index**

MARCH 1994 VOLUME 102 NUMBER 3

271 **IN THIS ISSUE**

REVIEW

273 **Tenascin: Does It Play a Role in Epidermal Morphogenesis and Homeostasis?** Virginia A. Lightner

REPORTS

278 **Melanoma-Derived Interleukin 6 Inhibits *In Vivo* Melanoma Growth** Cheryl A. Armstrong, Nancy Murray, Michael Kennedy, Sandhya V. Koppula, David Tara, and John C. Ansel

285 ***RAS* Mutations in Human Melanoma: A Marker of Malignant Progression** Nigel J. Ball, Joseph J. Yohn, Joseph G. Morelli, David A. Norris, Loren E. Golitz, and James P. Hoeffler

291 **Production and Characterization of Antibodies Against Human Tyrosinase** Brigitte Bouchard, Setaluri Vijayasaradhi, and Alan N. Houghton

296 **Ultraviolet Irradiation Induces c-fos but Not c-Ha-ras Proto-Oncogene Expression in Human Epidermis** Patricia K. Roddey, Marjan Garmyn, Hee-Young Park, Jag Bhawan, and Barbara A. Gilchrest

300 **Chromosome 9 Allele Loss Occurs in both Basal and Squamous Cell Carcinomas of the Skin** Anthony G. Quinn, Christine Campbell, Eugene Healy, and Jonathan L. Rees

304 **Epithelial-Stromal Interactions in Basal Cell Cancer: The PDGF System** Fredrik Pontén, Zhiping Ren, Monica Nistér, Bengt Westermark, and Jan Pontén

310 **Actin Polymerization, Calcium-Transients, and Phospholipid Metabolism in Human Neutrophils After Stimulation with Interleukin-8 and N-formyl Peptide** Johannes Norgauer, Jean Krutmann, Gustav J. Dobos, Alexis E. Traynor-Kaplan, Zenaida G. Oades, and Ingrid U. Schraufstätter

315 **Immunomorphologic Characterization of FcεRI-Bearing Cells Within the Human Dermis** Birgit Osterhoff, Klemens Rappersberger, Binghe Wang, Frieder Koszik, Kenichi Ochiai, Jean-Pierre Kinet, and Georg Stingl

321 **DNFB Contact Sensitivity (CS) in BALB/c and C3H/He Mice: Requirement for Early-Occurring, Early-Acting, Antigen-Specific, CS-Initiating Cells with an Unusual Phenotype (Thy-1$^+$, CD5$^+$, CD3$^-$, CD4$^-$, CD8$^-$, sIg$^-$, B220$^+$, MHC Class II$^-$, CD23$^+$, IR-2R$^-$, IL-3R$^+$, Mel-14$^-$, Pgp-1$^+$, J11d$^+$, MAC-1$^+$, LFA-1$^+$, and FcγRII$^+$)** Norihisa Ishii, Kazuo Takahashi, Hiroshi Nakajima, Shun-ichi Tanaka, Philip W. Askenase

328 **CD7-Negative Helper T Cells Accumulate in Inflammatory Skin Lesions** Martina Moll, Uwe Reinhold, Sylvia Kukel, Hinrich Abken, Rainer Müller, Iris Oltermann, and Hans-Wilhelm Kreysel

333 **Expression of Plasminogen Activator Enzymes in Psoriatic Epidermis** Elizabeth M. Spiers, Gerald S. Lazarus, and Bernadette Lyons-Giordano

339 **Successful Amplification of DNA Specific for Finnish *Borrelia burgdorferi* Isolates in Erythema Chronicum Migrans but Not in Circumscribed Scleroderma Lesions** Annamari Ranki, Einari Aavik, Pärt Peterson, Kristiina Schauman, and Päivi Nurmilaakso

346 **Establishment and Characterization of Two Merkel Cell Tumor Cultures** I. Moll, E. Bohnert, C. Herbst, W. Förster, R. Moll, and W. W. Franke

354 **Ultrastructure of Human Skin by a Rapid Freezing Technique: Structural Preservation and Antigenicity** Noriaki Aoki, Masaaki Ito, Sadakazu Ejiri, and Hidehiro Ozawa

362 **Ultrasound Structure and Digital Image Analysis of the Subepidermal Low Echogenic Band in Aged Human Skin: Diurnal Changes and Interindividual Variability** Monika Gniadecka, Robert Gniadecki, Jørgen Serup, and Jørgen Søndergaard

366 **Improved Barrier Structure Formation in Air-Exposed Human Keratinocyte Culture Systems** Manigé Fartasch and Maria Ponec

375 **Dynamic Changes in Intracellular Localization and Isoforms of the 27-kD Stress Protein in Human Keratinocytes** Marla McClaren and R. Rivkah Isseroff

382 **Sequence Analysis of a cDNA for Lysyl Hydroxylase Isolated from Human Skin Fibroblasts from a Normal Donor: Differences from Human Placental Lysyl Hydroxylase cDNA** Heather N. Yeowell, Van Ha, W. Lloyd Clark, Melanie K. Marshall, and Sheldon R. Pinnell

385 **Age-Dependent Changes of Hyaluronan in Human Skin** Ludger J.M. Meyer and Robert Stern

PROGRESS IN DERMATOLOGY

390 **Epidermolytic Hyperkeratosis: Applied Molecular Genetics** John J. DiGiovanna and Sherri J. Bale

APRIL 1994 VOLUME 102 NUMBER 4

TRIBUTE

397 **David Martin Carter, M.D., Ph.D.** Aaron B. Lerner

395 **IN THIS ISSUE**

REVIEW

398 **The Molecular Basis of Metal Recognition by T Cells** Francesco Sinigaglia

REPORTS

402 **Extracellular Domain of Pemphigus Vulgaris Antigen (Desmoglein 3) Mediates Weak Homophilic Adhesion** Masayuki Amagai, Sarolta Kàrpàti, Vera Klaus-Kovtun, Mark C. Udey, John R. Stanley

409 **Protein Kinase C Regulates Keratinocyte Transglutaminase (TG_K) Gene Expression in Cultured Primary Mouse Epidermal Keratinocytes Induced to Terminally Differentiate by Calcium** Andrzej A. Długosz and Stuart H. Yuspa

415 ***Ex Vivo* and *In Vivo* Gene Transfer to The Skin Using Replication-Deficient Recombinant Adenovirus Vectors** Yasuhiro Setoguchi, H. Ari Jaffe, Claire Danel, and Ronald G. Crystal

422 **UVB Light Induces Nuclear Factor κB (NFκB) Activity Independently from Chromosomal DNA Damage in Cell-Free Cytosolic Extracts** Manuel M. Simon, Yoshinori Aragane, Agatha Schwarz, Thomas A. Luger, and Thomas Schwarz

428 **Evidence that DNA Damage Is a Mediate in Ultraviolet B Radiation–Induced Inhibition of Human Gene Expression: Ultraviolet B Radiation Effects on Intercellular Adhesion Molecule-1 (ICAM-1) Expression** Jean Krutmann, Elisabeth Bohnert, and Ernst G. Jung

433 **Wavelength-Specific Upregulation of Keratin mRNA Expression in Response to Ultraviolet Radiation** Martin D. Smith and Jonathan L. Rees

440 **p53 Gene Mutations in Human Skin Cancers and Precancerous Lesions: Comparison with Immunohistochemical Analysis** Yoshiaki Kubo, Yoshio Urano, Katsuhiko Yoshimoto, Hiroyuki Iwahana, Kosaku Fukuhara, Seiji Arase, and Mitsuo Itakura

445 **A Factor in Human Plasma Permits Persistent Expression of E-Selectin by Human Endothelial Cells** Norbert T. Sepp, Jens Gille, Lian Jie Li, S. Wright Caughman, Thomas J. Lawley, and Robert A. Swerlick

451 **Role of Mast Cells in Early Epithelial Target Cell Injury in Experimental Acute Graft-Versus-Host Disease** George F. Murphy, Hirohiko Sueki, Cory Teuscher, Diana Whitaker, and Robert Korngold

462 **Keratinocyte Transglutaminase Expression Varies in Squamous Cell Carcinomas** Madeleine Duvic, Deidra Chema Nelson, Mary Annarella, Mimi Cho, Teresa Esgleyes-Ribot, Eva Remenyik, Roseann Ulmer, Ronald P. Rapini, Peter G. Sacks, Gary L. Clayman, Peter J.A. Davies, and Scott Thacher

470 **Dose-Response Effects of Acute Ultraviolet Irradiation on Antioxidants and Molecular Markers of Oxidation in Murine Epidermis and Dermis** Yasuko Shindo, Eric Witt, Derick Han, and Lester Packer

476 **Effect of Age on Antioxidants and Molecular Markers of Oxidative Damage in Murine Epidermis and Dermis** Monica Lopez-Torres, Yasuko Shindo, and Lester Packer

481 **Molecular Characterization of a Ferrochelatase Gene Defect Causing Anomalous RNA Splicing in Erythropoietic Protoporphyria** Robert P.E. Sarkany, David M. Whitcombe, and Timothy M. Cox

485 **Enhanced Pyrimidine Dimer Repair in Cultured Murine Epithelial Cells Transfected with the *den*V Gene of Bacteriophage T4** Donna F. Kusewitt, Cindy L. Budge, and Ronald D. Ley

490 **Phospholipid Analogue Hexadecylphosphocholine Inhibits Proliferation and Phosphatidylcholine Biosynthesis of Human Epidermal Keratinocytes *In Vitro*** Michael Detmar, Christoph C. Geilen, Thomas Wieder, Constantin E. Orfanos, and Werner Reutter

495 **Role of Gene Expression and Protein Synthesis of Tyrosinase, TRP-1, Lamp-1, and CD63 in UVB-Induced Melanogenesis in Human Melanomas** Hiroyuki Hara, Mu Hyoung Lee, Hua Chen, Dong Luo, and Kowichi Jimbow

501 **High Plasma Level of a Eumelanin Precursor, 6-Hydroxy-5-Methoxyindole-2-Carboxylic Acid as a Prognostic Marker for Malignant Melanoma** Hiroyuki Hara, Nicholas Walsh, Koji Yamada, and Kowichi Jimbow

506 **Merkel Cells of the Terminal Hair Follicle of the Adult Human Scalp** Yutaka Narisawa, Ken Hashimoto, and Hiromu Kohda

511 **Immunocytochemical Localization of Androgen Receptors in the Scalp of the Stumptail Macaque Monkey, a Model of Androgenetic Alopecia** Arthur R. Diani and Cynthia J. Mills

515 **Use of Human Skin-Grafted Nude Mouse Model for the Evaluation of Topical Retinoic Acid Treatment** Gail Otulakowski, Lubing Zhou, Wai-Ping Fung-Leung, Gerard J. Gendimenico, Steven E.S. Samuel, and Catherine Y. Lau

519 **The Receptor for Urokinase-type Plasminogen Activator is Expressed by Keratinocytes at the Leading Edge During Re-Epithelialization of Mouse Skin Wounds** John Rømer, Leif R. Lund, Jens Eriksen, Charles Pyke, Peter Kristensen, and Keld Danø

SID ABSTRACTS

523 **1994 Annual Meeting of the Society for Investigative Dermatology** Baltimore, Maryland—April 27–30, 1994

654 **Index**

JSID, SID, ESDR ABSTRACTS

661 **The Photo-Immunology Symposium** Sardinia—October 8–10, 1993

668 **Index**

MAY 1994 VOLUME 102 NUMBER 5

669 **IN THIS ISSUE**

REVIEW

671 **Free Radicals in Cutaneous Biology** Douglas Darr and Irwin Fridovich

REPORTS

676 **A Pleiotropic Response Is Induced in F9 Embryonal Carcinoma Cells and Rhino Mouse Skin by All-*trans*-Retinoic Acid, a RAR Agonist but Not by SR11237, a RXR-Selective Agonist** Gerard J. Gendimenico, Thomas B. Stim, Michael Corbo, Bernd Janssen, James A. Mezick

681 **Molecular Defects of Uroporphyrinogen Decarboxylase in a Patient with Mild Hepatoerythropoietic Porphyria** Kuniaki Meguro, Hiroyoshi Fujita, Nobuhiro Ishida, Reiko Akagi, Tatsuya Kurihara, Richard A. Galbraith, Attallah Kappas, John B. Zabriskie, Arnold C. Toback, Leonard C. Harber, and Shigeru Sassa

686 **Difference in Binding Sites of Autoantibodies Against 230- and 170-kD Bullous Pemphigoid Antigens on Salt-Split Skin** Yuko Onodera, Hiroshi Shimizu, Takashi Hashimoto, Akira Ishiko, Tamotsu Ebihara, Masaru Tanaka, and Takeji Nishikawa

691 **Abnormal Keratin 1 and 10 Cytoskeleton in Cultured Keratinocytes from Epidermolytic Hyperkeratosis Caused by Keratin 10 Mutations** Marcel Huber, Corinne Scaletta Messod Benathan, Edgar Frenk, David A. Greenhalgh, Joseph A. Rothnagel, Dennis R. Roop, and Daniel Hohl

695 **Risk Factors for Developing Cutaneous Melanoma and Criteria for Identifying Persons at Risk: Multicenter Case-Control Study of the Central Malignant Melanoma Registry of the German Dermatological Society** Claus Garbe, Petra Büttner, Jürgen Weiß, Hans Peter Soyer, Ulrich Stocker, Sabine Krüger, Marianne Roser, Jörg Weckbecker, Renato Panizzon, Friedrich Bahmer, Wolfgang Tilgen, Irene Guggenmoos-Holzmann, and Constantin E. Orfanos

700 **Associated Factors in the Prevalence of More Than 50 Common Melanocytic Nevi, Atypical Melanocytic Nevi, and Actinic Lentigines: Multicenter Case-Control Study of the Central Malignant Melanoma Registry of the German Dermatological Society** Claus Garbe, Petra Büttner, Jürgen Weiß, Hans Peter Soyer, Ulrich Stocker, Sabine Krüger, Marianne Roser, Jörg Weckbecker, Renato Panizzon, Friedrich Bahmer, Wolfgang Tilgen, Irene Guggenmoos-Holzmann, and Constantin E. Orfanos

706 **Epitope Mapping for Epidermolysis Bullosa Acquisita Autoantibody by Molecularly Cloned cDNA for Type VII Collagen** Toshihiro Tanaka, Fukumi Furukawa, and Sadao Imamura

710 **Differences in IL-2 Receptor Levels Between Mycosis Fungoides and Cutaneous Type Adult T-Cell Leukemia/Lymphoma in the Early Stages of the Disease** Munashi Oishi, Masayoshi Johno, Tomomichi Ono, and Mitsuo Honda

716 **Isolation and Characterization of a Novel Hair Follicle–Specific Gene, Hacl-1** Nam-ho Huh, Mariko Kashiwagi, Chieko Konishi, Yu Hashimoto, Yohko Kohno, Shintaro Nomura, and Toshio Kuroki

721 **Antibodies to Hair Follicles in Alopecia Areata** Desmond J. Tobin, Norman Orentreich, David A. Fenton, and Jean-Claude Bystryn

725 **Variation of Differentiation in Nail and Bovine Hoof Cells** Takashi Kitahara and Hideoki Ogawa

730 **Retinoic Acid Induces Expression of Early Growth Response Gene-1 (Egr-1) in Human Skin *In Vivo* and in Cultured Skin Fibroblasts** Frederik Grønhøj Larsen, John J. Voorhees, and Anders Åström

734 **Circadian Activity of Topical 0.05% Betamethasone Dipropionate in Human Skin *In Vivo*** Lynn K. Pershing, Judy L. Corlett, Lyssa D. Lambert, and Craig E. Poncelet

740 **Effect of Terbinafine on the Pharmacokinetics of Cyclosporin in Humans** C. Colin Long, Stephanie A. Hill, Robert C. Thomas, Atholl Johnston, Stephen G. Smith, Francis Kendall, and Andrew Y. Finlay

744 **Structural Organization of the Human Tyrosinase Gene and Sequence Analysis and Characterization of its Promoter Region** Selvarangan Ponnazhagan, Ling Hou, and Byoung S. Kwon

749 **Synthesis of Interleukin-1α and β by Normal Human Melanocytes** Viki B. Swope, Daniel N. Sauder, Roderick C. McKenzie, R. Michael Sramkoski, Kimberly A. Krug, George F. Babcock, James J. Nordlund, and Zalfa A. Abdel-Malek

754 **Ras p21 Farnesylation in Ultraviolet B Radiation–Induced Tumors in the Skin of SKH-1 Hairless Mice** Sikandar G. Khan, David R. Bickers, Hasan Mukhtar, and Rajesh Agarwal

759 **Effects of Dietary Selenium on UVB-Induced Skin Carcinogenesis and Epidermal Antioxidant Status** Barbara C. Pence, Erica Delver, and Dale M. Dunn

762 **Cellular Sensitivity to Oxidative Stress in the Photosensitivity Dermatitis/Actinic Reticuloid Syndrome** Lee Ann Applegate, Edgar Frenk, Neil Gibbs, Brian Johnson, James Ferguson, and Rex M. Tyrrell

768 **High-Efficiency Transfection of Primary Human Keratinocytes with Positively Charged Lipopolyamine:DNA Complexes** Cathy Staedel, Jean-Serge Remy, Zhongxue Hua, Thomas R. Broker, Louise T. Chow, and Jean-Paul Behr

773 **Expression of Monoclonal Antibody HECA-452–Defined E-Selectin Ligands on Langerhans Cells in Normal and Diseased Skin** Frieder Koszik, Dirk Strunk, Ingrid Simonitsch, Louis J. Picker, Georg Stingl, and Elisabeth Payer

781 **Full-Thickness Skin Grafts from Flaky Skin Mice to Nude Mice: Maintenance of the Psoriasiform Phenotype** John P. Sundberg, Robert W. Dunstan, Dennis R. Roop, and Wesley G. Beamer

789 **Selective Obliteration of the Epidermal Calcium Gradient Leads to Enhanced Lamellar Body Secretion** Gopinathan K. Menon, Lisa F. Price, Bommi Bommannan, Peter M. Elias, and Kenneth R. Feingold

796 **Production of 1,25 Dihydroxyvitamin D_3 by Perfused Pig Skin** D.D. Bikle, B.P. Halloran, and J.E. Riviere

799 **Influence of Altered Serum Cholesterol Levels and Fasting on Cutaneous Cholesterol Synthesis** Susanna Wu-Pong, Peter M. Elias, and Kenneth R. Feingold

803 **Complement Peptides C3a- and C5a-Induced Mediator Release from Dissociated Human Skin Mast Cells** Suhad G. El-Lati, Clemens A. Dahinden, and Martin K. Church

807 **Changes in Skin Circulation After Insertion of a Microdialysis Probe Visualized by Laser Doppler Perfusion Imaging** Chris Anderson, Thomas Andersson, and Karin Wårdell

812 **Localization of Neurofibromin to Keratinocytes and Melanocytes in Developing Rat and Human Skin** Ritu Malhotra and Nancy Ratner

RAPID COMMUNICATION

819 **Absence of *p53* Gene Mutations in Cutaneous Melanoma** Jann Lübbe, Martin Reichel, Güner Burg, and Paul Kleihues

LETTERS TO THE EDITOR

822 Virginia P. Sybert and Karen Stephens

822 **Identification of the ATG Initiation Codon in Human Type I Desmocollin** Ian A. King

JUNE 1994 VOLUME 102 NUMBER 6

823 **IN THIS ISSUE**

EDITORIALS

825 **Genetic Linkage Mapping of Heritable Skin Diseases: Positional Cloning Versus the Candidate Gene Approach** Jouni Uitto

827 **The Autoantibodies of Neonatal Lupus Erythematosus** Daniel P. McCauliffe

REVIEW

828 **Th1-Th2 Paradigm: Insights from Leprosy** Robert L. Modlin

REPORTS

833 **Characterization of Expression and Modulation of Cell Adhesion Molecules on an Immortalized Human Dermal Microvascular Endothelial Cell Line (HMEC-1)** Yuelin Xu, Robert A. Swerlick, Norbert Sepp, Diane Bosse, Edwin W. Ades, and Thomas J. Lawley

838 **Interleukin-7 Induces Differential Lymphokine-Activated Killer Cell Activity Against Human Melanoma Cells, Keratinocytes, and Endothelial Cells** Dirk Schadendorf, Markus Böhm, Peter Möller, Thomas Grünewald, and Beate M. Czarnetzki

843 **IL-4 Induces Chemotaxis of Blood Eosinophils from Atopic Dermatitis Patients, but not from Normal Individuals** Gerald R. Dubois, Carla A.F.M. Bruijnzeel-Koomen, and Piet L.B. Bruijnzeel

847 **Alopecia Areata in Aging C3H/HeJ Mice** John P. Sundberg, Wade R. Cordy, and Lloyd E. King, Jr.

857 **Effects of Insulin and Insulin-Like Growth Factors on Cultured Human Hair Follicles: IGF-I at Physiologic Concentrations Is an Important Regulator of Hair Follicle Growth *In Vitro*** M.P. Philpott, D.A. Sanders, and T. Kealey

862 **Melanogenesis During the Anagen-Catagen-Telogen Transformation of the Murine Hair Cycle** Andrzej Slominski, Ralf Paus, Przemyslaw Plonka Ashok Chakraborty, Marcus Maurer, Daniel Pruski, and Stanislaw Lukiewicz

870 **Cadherin Function Is Required for Human Keratinocytes to Assemble Desmosomes and Stratify in Response to Calcium** Jani E. Lewis, Pamela J. Jensen, and Margaret J. Wheelock

878 **Development of an ELISA to Detect Anti-BP180 Autoantibodies in Bullous Pemphigoid and Herpes Gestationis** George J. Giudice, Kendell C. Wilske, Grant J. Anhalt, Janet A. Fairley, Ann F. Taylor, Daryl J. Emery, Raymond G. Hoffman, and Luis A. Diaz

882 **Pemphigus Foliaceus Sera Recognize an N-Terminal Fragment of Bovine Desmoglein 1** Monica Olague-Alcala, George J. Giudice, and Luis A. Diaz

886 **Retinoic Acid Suppression of Loricrin Expression in Reconstituted Human Skin Cultured at the Liquid-Air Interface** Laura J. Brown, Jeffrey C. Geesin, Joseph A. Rothnagel, Dennis R. Roop, and Joel S. Gordon

891 **Dibutyryl Cyclic AMP Modulates Keratinocyte Migration Without Alteration of Integrin Expression** Toshiroh Iwasaki, John D. Chen, Janice P. Kim, Kimberly C. Wynn, and David T. Woodley

898 **Differential Effects of Interleukin 1-α (IL-1α) or Tumor Necrosis Factor-α (TNF-α) on Motility of Human Melanoma Cell Lines on Fibronectin** Sybren K. Dekker, Jacqueline Vink, Bert Jan Vermeer, Jan A. Bruijn, Martin C. Mihm Jr., and H. Randolph Byers

906 **The Chemokine RANTES Is More than a Chemoattractant: Characterization of Its Effect on Human Eosinophil Oxidative Metabolism and Morphology in Comparison with IL-5 and GM-CSF** Alexander Kapp, Gabriele Zeck-Kapp, Wolfgang Czech, and Erwin Schöpf

915 **Cytokine Induction in Human Epidermal Keratinocytes Exposed to Contact Irritants and Its Relation to Chemical-Induced Inflammation in Mouse Skin** James L. Wilmer, Florence G. Burleson, Fujio Kayama, Jun Kanno, and Michael I. Luster

923 **Ultraviolet Radiation–Induced Impairment of the Early Initiating and the Late Effector Phases of Contact Hypersensitivity to Picrylchloride: Regulation by Different Mechanisms** Yvonne Sontag, Johan Garssen, Frank R. de Gruijl, Jan C. van der Leun, Willem A. van Votlen, and Henk van Loveren

928 **Phenotypic and Ultrastructural Properties of Antigen-Presenting Cells Involved in Contact Sensitization of Normal and UV-Irradiated Mice** Corazon D. Bucana, Jun-Min Tang, Kenneth Runner, Jr., Faith M. Strickland, and Margaret L. Kripke

934 **Protective Effect of N-Acetylcysteine in Hapten-Induced Irritant and Contact Hypersensitivity Reactions** Giorgio Senaldi, Pascal Pointaire, Pierre-François Piguet, and Georges E. Grau

938 **Cyclosporin A Enhances Cytokine and Phorbol Ester–Induced Fibroblast Collagenase Expression** Jouko Lohi, Veli-Matti Kähäri, and Jorma Keski-Oja

945 **Expression of 72-kDa Gelatinase (MMP-2), Collagenase (MMP-1), and Tissue Metalloproteinase Inhibitor (TIMP) in Primary Pig Skin Fibroblast Cultures Derived from Radiation-Induced Skin Fibrosis** C. Lafuma, R. Azzi El Nabout, F. Crechet, A. Hovnanian, and M. Martin

951 **Localization of Type I Human Skin Collagenase in Developing Embryonic and Fetal Skin** Kelly A. McGowan, Eugene A. Bauer, and Lynne T. Smith

958 **Expression of Type II Collagen at the Middle Stages of Chick Embryonic and Human Fetal Skin Development** Noriyuki Azuma, Tatsuya Izumi, Shingo Tajima, Takeji Nishikawa, and Akira Ohshima

963 **Autoantibodies of Neonatal Lupus Erythematosus** Lela A. Lee, Mark Barton Frank, Victoria R. McCubbin, and Morris Reichlin

967 **Patient Measurement of Psoriasis Disease Severity With a Structured Instrument** Alan B. Fleischer, Jr., Stephen R. Rapp, David M. Reboussin, Jill C. Vanarthos, and Steven R. Feldman

970 **Multiple Cytochrome P450 Isozymes in Murine Skin: Induction of P450 1A, 2B, 2E, and 3A by Dexamethasone** Frank K. Jugert, Rajesh Agarwal, Andreas Kuhn, David R. Bickers, Hans F. Merk, and Hasan Mukhtar

976 **A Role for Ions in Barrier Recovery After Acute Perturbation** Seung H. Lee, Peter M. Elias, Kenneth R. Feingold, and Theodora Mauro

980 **Human Keratinocytes Possess an *sn*-2 Acylhydrolase that is Biochemically Similar to the U937-Derived 85-kDa Phospholipase A_2** Mark McCord, Marie Chabot-Fletcher, John Breton, and Lisa A. Marshall

987 **Carcinoma-Associated 38-kD Membrane Glycoprotein MH 99/KS 1/4 Is Related to Proliferation and Age of Transformed Epithelial Cell Lines** Michael P. Schön, Margarete Schön, C. Eberhard Klein, Ulrike Blume, Susanne Bisson, and Constantin E. Orfanos

COMMUNICATION

992 **Hailey-Hailey Disease Is Not Allelic to Darier's Disease** Elizabeth A. Welsh, Shigaku Ikeda, Anna M. Peluso, Jeannette M. Bonifas, John W. Bare, David T. Woodley, and Ervin H. Epstein, Jr.

INDEXES FOR VOLUME 102

994 **Author Index**

1005 **Subject and Title Index**

1016 **Volume Contents**

JUNE 1994 VOLUME 102 NUMBER 6, SUPPLEMENT
NIH Symposium, Epidemiology of Skin Disease

2S **Preface** Lawrence E. Shulman

3S **Introduction** Reva Lawrence, Alan Moshell, Kayvon Safavi, and Robert Stern

EPIDEMIOLOGY OF NONMELANOMA SKIN CANCER

4S **Epidemiology of Nonmelanoma Skin Cancer: Clinical Issues, Definitions, and Classification** Martin A. Weinstock

6S **Epidemiologic Investigation of Nonmelanoma Skin Cancer Mortality: The Rhode Island Follow-Back Study** Martin A. Weinstock

10S **Occurrence of Cutaneous Basal Cell and Squamous Cell Malignancies Among Those with a Prior History of Skin Cancer** Margaret R. Karagas, for the Skin Cancer Prevention Study Group

EPIDEMIOLOGY OF PSORIASIS

14S **Epidemiology of Psoriasis: Clinical Issues** Gerald G. Krueger and Madeleine Duvic

19S **Analytic Epidemiology in Psoriasis** Luigi Naldi, Gianni Tognoni, and Tullio Cainelli

24S **Epidemiology and the Genetics of Psoriasis** James T. Elder, Rajan P. Nair, and John J. Voorhees

EPIDEMIOLOGY OF TOXIC EPIDERMAL NECROLYSIS

28S **The Spectrum of Stevens-Johnson Syndrome and Toxic Epidermal Necrolysis: A Clinical Classification** Jean-Claude Roujeau

31S **Epidemiologic Approaches to the Study of Toxic Epidermal Necrolysis** David W. Kaufman

DERMATOLOGIC ASPECTS OF HIV INFECTION

34S **Epidemiology of Skin Disease in HIV Infection: A Cohort Study of Health Maintenance Organization Members** Robert S. Stern

CHRONIC CUTANEOUS ULCERS

38S **Chronic Cutaneous Ulcers: Etiology and Epidemiology** Tania J. Phillips

42S **Correlates of Pressure Sores in Nursing Homes: Evidence from the National Medical Expenditure Survey** William D. Spector

SPECIAL TOPICS

46S **Genetic Epidemiologic Studies in the Etiology of Skin Diseases** Christopher I. Amos and Sherri J. Bale

49S **The Genetics of Ichthyosis: A Primer for Epidemiologists** Sherri J. Bale and Sharon Z. Doyle

51S **Data Resources for Epidemiology of Skin Diseases** Kayvon Safavi

54S **The National Epidermolysis Bullosa Registry** Jo-David Fine, Lorraine B. Johnson, and Chirayath M. Suchindran

CLOSING REMARKS

57S **Opportunities for Research in Dermatologic Epidemiology** Gary D. Friedman